



HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Marsha S. McLaughlin, Director

www.howardcountymd.us

FAX 410-313-3467

TDD 410-313-2323

August 13, 2008

TECHNICAL STAFF REPORT

*Planning Board Meeting of August 28, 2008
County Council Hearing to be scheduled*

Case No. / Petitioner: CR77-2008, introduced by the Chairman at the request of the County Executive

Request: Approval of the Master Plan for Water and Sewerage, 2008 Amendment

Department of Planning and Zoning Recommendation:

Approval

I. BACKGROUND INFORMATION

The following is based on background information provided by the Department of Public Works.

In accordance with State Law, each County in Maryland is required to develop a Master Plan for Water & Sewerage which provides for the orderly expansion of the local water and sewerage systems. The Master Plan is to be reviewed and amended at least triennially. The County routinely reviews and amends the Master Plan on a semiannual basis. The 2008 Master Plan Amendment represents major amendments and replaces the 2003 Master Plan in its entirety.

The 2008 Master Plan was developed in conjunction with the County's General Plan 2000 and is based on growth and development projections provided by the Department of Planning and Zoning (DPZ). DPZ population and commercial development projections from the 2006 (Round 6c) projections were used to develop water and wastewater flows for the planning years 2010, 2015, 2020, 2025 and 2030. These design flows were used to analyze the water and sewerage infrastructure and prepare detailed assessments of the capital projects required to upgrade the water and wastewater systems.

Highlights of the 2008 Master Plan and changes from the 2003 Master Plan are as follows:

Planned Service Area

- Specific areas of the County were placed in the Planned Service Area to match amendments made to the General Plan 2000 from April 2003 through April 2008. These five amendments added 201.45 acres, including 177.4 acres of Howard County property within the Alpha Ridge Water Service Area that was granted water and sewer service.

Water Plan

- The Plan was updated to reflect the increased water demands from 2003 to 2008. In 2003, the average daily water demand was approximately 22 million gallons per day from the public system. In 2008, the average daily demand is approximately 23 million gallons per day. The overall increase coincides with the additional residential population and commercial demand; however, the “per capita” water usage rate appears to be declining. The total contracted water supply remains at 41.5 million gallons per day, which is adequate through the planning period of 2030.
- The Plan was amended to include current negotiations with the Washington Suburban Sanitary Commission (WSSC) concerning a better purchase rate. It is the County’s intent to increase the average daily draw from the WSSC in exchange for a lower rate, in order to provide additional system redundancy.
- The Plan was amended to fully describe the County’s existing water pressure zones.
- The Plan was updated to reflect the progress of projects to meet future water supply needs in and outside of the County, including improvements to the Western Third Zone water supply, which is done in coordination with Baltimore City and Baltimore County.
- In Chapter 3, The Water Plan, Table 8 was updated to reflect the comprehensive priorities for water system development. This table lists capital projects for water system upgrades that are required as the result of deficiencies determined by water system modeling, actual operational problems, or requests from property owners who are currently in the Metropolitan District for extensions of the public system.

Sewerage Plan

- The Plan was amended to fully describe the proposed upgrades to the Little Patuxent Water Reclamation Plant (LPWRP) under the seventh addition project. This upgrade will bring the LPWRP into compliance with Enhanced Nutrient Removal (ENR) standards for nitrogen and phosphorous discharges, and will bring the plant’s hydraulic capacity to 29 million gallons per day. The improvements are expected to be completed and on line in the summer of 2012.
- The Plan was updated to reflect the progress of projects to meet future wastewater treatment needs in and outside of the County, including the upgrade to the Patapsco Wastewater Treatment Plant, which is done in coordination with Baltimore City and Baltimore County.
- The Plan was updated to reflect the additional sewer flows from 2003 to 2008. In 2003, approximately 22 million gallons per day were discharged to the public sewer system, of which 17.1 million gallons went to the LPWRP. In 2006, the total flows to the public system were 24.7 million gallons per day, of which 19.1 million gallons went to the LPWRP. Similar to the water use, the “per capita” rate appears to be declining. With the upgrade to the LPWRP, the County will have a total projected capacity of 41.4 million gallons per day, which is adequate through the planning period of 2030.
- The Plan addresses the County’s Reclaimed Water initiative. This system, currently being constructed, uses treated effluent from the LPWRP to serve the cooling water and irrigation needs of two large commercial users along Route 1. This system is being sized for up to 5 million gallons per day of treated effluent, with the intention of serving both commercial and residential

developments along the Route 1 corridor, as demand dictates. Expansion beyond the immediate LPWRP vicinity will be based on potential customers and “scalping” plants are being considered for potential customers whose distance from the LPWRP makes service impractical. (Note: A “scalping plant” is a small wastewater treatment plant that withdraws from a large sewer interceptor, treats the wastewater to standards acceptable for reclaimed water, and returns the solids to the interceptor for final treatment at a main plant. These facilities could be placed at key locations along the main sewers to help supply reclaimed water for irrigation, cooling, etc. in areas of direct need without the expense of long pumping runs from the LPWRP.)

- The Plan adds a separate section for Shared Sewage Disposal Systems in Chapter 4, The Sewerage Plan. A shared sewage disposal system serves more than one lot with a common septic tank and/or advanced pretreatment and a common disposal field. This section clarifies the requirements for acceptance of large facilities (greater than 10,000 gallons per day maximum daily design flows), and describes the treatment systems to be used for systems of varying flow capacities. Table 10B was updated to include existing and proposed shared sewage disposal facilities.
- The Plan was amended to include the provision for sewer service in the Alpha Ridge Water Service Area for qualifying parcels. Qualifying parcels are defined as those parcels which are owned by Howard County or the Board of Education, and adjoin another parcel where sewer service is available.
- The Plan was amended to include the potential administrative oversight of certain functions of multi-user sewerage systems by the Department of Public Works. A multi-user sewerage system is a single system serving a group of individuals on a single lot.
- Chapter 4, Table 13, was updated to reflect the comprehensive priorities for sewer system development. This table lists capital projects for sewer system upgrades that are required as the result of deficiencies determined by sewer system modeling, actual operational problems, or requests from property owners who are currently in the Metropolitan District for extensions of the public system.

The following discussion of the Rockburn Branch Interceptor is provided in response to community questions and comments about the Master Plan designation of the interceptor:

- The 1993 Water and Sewer Master Plan listed the Rockburn Branch Interceptor east of Landing Road in the comprehensive category. In the 1999 Master Plan, the Health Department identified Rockburn Branch as a “problem area” due to failing septic systems, so the Rockburn Interceptor east of Landing Road was placed in the 6 - 10 year category. The 2003 Master Plan maintained this category classification.
- In 2005, three properties located within the Metropolitan District along the lower section of Rockburn Branch (just west of River Road) made official requests for the extension of public sewer to their properties to correct the onset of failing septic systems. These requests were reviewed by the Utilities Design Division and a capital project was established in FY07 (\$6260) to provide sewer service to the affected properties by the construction of an interceptor along the lower reaches of Rockburn Branch. A design report is currently being prepared for the alignment.
- In 2006, the developers of the Shadowbrook Downs community along Elibank Drive submitted a sewer study for the proposed development. The proposed community will have 25 homes, and the

developer initially proposed construction of a sewer crossing of I-95. The Utilities Design Division reviewed the request and responded that gravity service is the preferred method for providing sewer to the development, and that the proposed Rockburn Branch Interceptor would be available to the east of the development.

- In July 2008, the Department of Public Works met with a representative of several area residents concerned about the classification of the Rockburn Branch Interceptor in the 6 - 10 year category. The Department of Public Works agreed to place the section of the Rockburn Branch Interceptor to the west of the proposed Shadowbrook Downs community back in the comprehensive category for sewer. This will insure that there will be no County initiated capital projects to extend public sewer service to these areas for the purpose of promoting development. Only requests for sewer service by properties located within the Metropolitan District or ordered by the Health Department, which could be served by an extension of this sewer, will have the ability to request an extension should they have a failing septic system. DPW proposes to amend the Master Plan maps and the Table 13 Priorities for Sewer System Development project list to reflect this change in the January 2009 Routine Amendments.

II. AGENCY COMMENTS

As part of the preparation process, the 2008 Master Plan was reviewed by the Department of Planning and Zoning, the Health Department, and other Bureaus within the Department of Public Works. Comments received from these agencies were incorporated into the Master Plan.

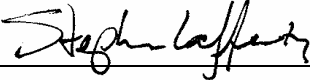
IV. EVALUATIONS AND CONCLUSIONS

Relation to the General Plan

The 2008 Master Plan for Water & Sewerage uses growth and development projections based on the Howard County General Plan 2000, therefore it is consistent with the General Plan 2000.

V. RECOMMENDATION

For the reason noted above, the Department of Planning and Zoning recommends APPROVAL of the Master Plan for Water & Sewerage, 2008 Amendment.



For Marsha S. McLaughlin, Director Date

MM/sro

NOTE: The file on this case is available for review at the Public Service Counter in the Department of Planning and Zoning.